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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,759	09/25/2003	Burkhard Kruper	35878	9323

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EXAMINER	
PRICE, CARL D	

ART UNIT	PAPER NUMBER
3749	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/671,759	KRUPER ET AL.	
	Examiner	Art Unit	
	CARL D. PRICE	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 7-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 7-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims **1-4** and **7-16** have been considered but are moot in view of the new ground(s) of rejection.

Newly discovered prior art references of **US5800156 (KAHLKE et al)** and **JP 08-28822** are now relied on to address the limitations of applicant's claimed invention. See below.

Specification

The disclosure is objected to because of the following informalities:

- On page 1 of the specification, since the scope of the claims will likely change during the prosecution of the present application, the recitation "The present invention relates to a jet burner in accordance with the preamble of patent claim 1 as well as a method for manufacturing the same, in accordance with the preamble of patent claims 10 and/or 12, respectively." is objected to.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 10 and 11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 2, there is no proper antecedent basis for "a second surface". And, in claim 10, there is no proper antecedent basis for "a second surface"(second occurrence).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4 and 7-13 : Rejected under 35 U.S.C. 103(a)

Claims 1-4 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **US5800156 (KAHLKE et al)** in view of **JP 08-28822** and **US4608012 (Cooper)** (of record).

US5800156 (KAHLKE et al) shows and discloses a radiant burner including:

- a burner surface (5) permeable by a gaseous fuel and on which the gaseous fuel burns, the burner surface comprising:

- first surface areas (not referenced) provided on masses of porous or permeable ceramics (see column 3, lines 41-50 and second surface areas (not referenced) being impermeable (i.e. – "zero gas permeability") by the gaseous fuel, wherein the masses of ceramic are held in the ceramic plate. See column 3, lines 50-63 which state the following:

(3) In order to provide a particularly effective manner of achieving the object of the invention, namely the need for only a very short heat-up period before the glowing regions of the burner plate first become visible, the gas-impermeable regions should constitute 40% to 70%, in particular 50% to 60%, of the total area of the burner plate, the total output of the burner remaining at the same level even given the regions of different, reduced or zero gas permeability and the resultant reduction in output in these regions.

(4) The regions of the burner plate of different gas permeability can be **designed as circular or annular zones arranged concentrically to one another, as sections of a circle or sectors and/or segments or, alternatively, are of spiral design.**

(9) However, it is also possible for the regions of the burner plate of different gas permeability to be assigned regions of different materials. Thus, the gas-permeable regions of the burner plate can, for example, be in the form of sectors made of fiber materials, especially SiC fibers, and for the regions which have a zero gas permeability to be composed of impermeable Al.sub.2 O.sub.3 or cordierite segments. **The segments of different materials are then assembled and, for example, mounted in a mask.**

(10) In all the embodiments considered thus far, the regions of different gas permeability are the result of chemical and/or physical differences in the material properties of the burner plate itself, which is monolithic or built up from a plurality of individual regions. However, it is also possible for the regions of different gas permeability to be formed by a second material arranged on and/or underneath and/or in the completely or partially gas-permeable burner plate and having a gas permeability different from that of
the burner plate. The second material can be a different material, especially Al.sub.2 O.sub.3, or the same material, especially SiC with different density or porosity properties from the burner plate itself.

(11) It is also possible for the regions of different gas permeability to be formed by coating them with a temperature-stable, gas-impermeable material, especially with finely particulate Al.sub.2 O.sub.3 on the top and/or bottom

> side of the burner plate, or to be formed by masks, covers or **glued-down portions of reduced or zero gas permeability,** made, in particular, of high-grade steel sheet, which are positioned on the top and/or bottom side and/or sandwich-fashion in the burner plate.

US5800156 (KAHLKE et al) shows and discloses the invention substantially as set forth in the claims with possible exception to:

- the plurality of first surface areas being imbedded in the second surface area; and
- the first permeable surface being made from ceramic foam.

JP 08-28822 teaches, form the same radiant burner field of endeavor as **US5800156 (KAHLKE et al)**, adhesively attaching permeable first surface elements (3) to a non-permeable second surface (1) in the form of a mask (figure 1), as segments below openings (14) on the second the surface or embedded within openings (12) in the second surface.

US004608012 (Cooper) teaches, form the same radiant burner field of endeavor as **US5800156 (KAHLKE et al)**, forming permeable radiant burner surfaces from ceramic foam.

In regard to claims **1-4** and **7-13**, for the purpose providing means for securing together the permeable and non-permeable portions it would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to embed the permeable first portions of **US5800156 (KAHLKE et al)** in openings of the second non-permeable portion, in view of the teaching of **JP 08-28822**. Also, for the purpose of providing a suitable high temperature heat

resistant material for the permeable surface, it would have been obvious to a person having ordinary skill in the art to form the permeable radiant burner surfaces from ceramic foam, in view of the teaching of **US004608012 (Cooper).**

Conclusion

See the attached USPTO form 892 for prior art made of record and not relied upon which is considered pertinent to applicant's disclosure.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CARL D. PRICE
Primary Examiner
Art Unit 3749

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